UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,381	09/26/2003	Bharat T. Doshi	Doshi 56-5-21-17-33	8412

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EXAMINER
CLOUD, JOIYA M

ART UNIT	PAPER NUMBER
2444	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/673,381	DOSHI ET AL.
	Examiner	Art Unit	
	Joiya M. Cloud	2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *24 January 2010*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-24* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-24* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *See Continuation Sheet*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :07/25/2008, 11/04/2008, 03/02/2009, 07/22/2009,10/22/2009, 10/22/2009.

DETAILED ACTION

This action is responsive to the communication filed 11/24/2009. Claims 1-24 are

PENDING. Applicant's arguments have been considered, but are moot in view of new grounds

of rejection.

IDS

Examiner acknowledges the IDS submitted 07/25/2008, 11/04/2008, 03/02/2009,

07/22/2009,10/22/2009, 10/22/2009.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sinha (U.S**

Patent 6,904,462) et al. in view of Walrand et al. **(U.S. Patent No. 7,046,655).**

As per claim 1, Sinha discloses the invention substantially as claimed. Sinha

teaches representing, in a network data structure, information associated with a mesh network

having a plurality of nodes interconnected by a plurality of links **(Abstract, where Sinha**

discloses a plurality of vectors identifying the links and nodes of the network), wherein the

network data structure comprises, for each link in the network and each node or other link in the

network, a representation of a minimum amount of protection bandwidth required to be reserved

on said each link to restore service upon failure of said each node or other link **(col. 2, lines 29-**

49, col. 2, lines 56-col. 3, lines 10 and col. 4, lines 25-35, where existing protection path

bandwidth is allocated to a protection links); a new working path is represented by a service

data structure comprising an identification of each link and transit node in a primary path for the

new working path **(col. 2, lines 66-col. 3, lines 15)**; determining, using the network and service

data structures, whether the new working path requires additional protection bandwidth to be

reserved on any link in the network **(col. 3 lines 45-60, where it is determined the allocation of**

protection bandwidth of a new working path against the existing protection bandwidth);

and updating the network data structure if any additional protection bandwidth is determined to

be required for the new working path **(col. 3, lines 54-60, where "new p rotection links are**

added to protect the defined working path" ;col. 3, lines 15-26 and col. 5, lines 23-30).

However, Sinha does not explicitly disclose *receiving a request* for wherein the request is

for a new *service*.

Walrand discloses *receiving a request* for wherein the request is for a new *service*

receiving a request for wherein the request is for a new *service* **(col. 13, lines 37-47)**.

Accordingly, it would have been obvious to one of ordinary skill in the networking art at

the time the invention was made to have incorporate 's Sinha's teachings to the teachings of

Walrand, for the purpose initiating a connection for a working path to carry out a service (i.e. a

request to switch or reroute to a suitable path in the event of path failure, col. 13, lines 37-45).

As per claim 2, Sinha-Walrand teaches wherein the service data structure further comprises an identification of bandwidth associated with the new service **(col. 2, lines 66-col. 3, lines 15).**

As per claim 3, Sinha-Walrand teaches wherein the network is a virtual-circuit mesh data network that transmits packetized data **(Walrand: col. 3, lines 8-22).**

As per claims 4 and 5, Sinha-Walrand wherein the network data structure is distributed over the network such that at least one node in the network does not have all of the information in the network data structure and wherein each of the nodes in the network has all of the information in the network data structure **(col. 5, lines 24-30)**

As per claim 6, Sinha-Walrand teaches a method further comprising, in response to the new service request, determining a restoration path for the new service in the network using the network data structure **(Sinha: col. 3, lines 15-col. 4, line 10).**

As per claim 7, Sinha-Walrand teaches wherein the data structure is an array of vectors wherein each data structure in the array corresponds to a different link in the network; each vector in the array has a plurality of entries corresponding to the nodes and links in the network **(Sinha: col. 2, lines 65-col. 3, lines 26, where Sinha discloses each link having a vector containing a plurality of vector elements)**; for a first data structure corresponding to a first link, each entry in the first vector corresponding to a node or link identifies the minimum amount of protection bandwidth required to be reserved on the first link to restore service upon failure of the node or other link **(col. 2, lines 29-49, col. 2, lines 56-col. 3, lines 10 and col. 4, lines 25-35,**

where existing protection path bandwidth is allocated to a protection links); and the service

data structure is a primary path vector having a plurality of entries corresponding to the nodes

and links in the network, wherein each entry of the primary path vectors identifies whether the

corresponding node or link is part of the primary path for the new service **(col. 4, lines 19-24).**

As per claim **8**, Sinha-Walrand teaches wherein determining whether the new service

requires any additional protection bandwidth to be reserved on a link A in the network comprises

applying a vector addition operation between the primary path vector corresponding to the new

service request and the vector of the array corresponding to the link A to form a result vector

service **(Sinha: col. 4, lines 45-58).**, and comparing the maximum value in the result vector with

the bandwidth already reserved on the link A to determine whether any additional protection

bandwidth is required for the new service **(Sinha-col. 4, lines 66-col. 5, line 9)**.

As per claim **9**, Sinha-Walrand teaches wherein the additional protection bandwidth is

required and is reserved if any result vector entry is greater than the bandwidth already reserved

on the link **(col. 2, lines 65-col. 3, lines 15).**

As per claim **10**, Sinha-Walrand teaches wherein the vector addition operation is applied

between the primary path vector and each vector in the array corresponding to each different link

in a restoration path for the new service **(Sinha: col. 4, lines 45-58).**

As per claim **11**, Sinha-Walrand teaches wherein the service data structure is primary

path node-link vector V.sub.pnl **(col. 4, lines 25-58).**

As per claim **12**, Sinha-Walrand teaches wherein an incremental version of the network

data structure is used for transmitting sharing information in order to reduce the amount of data

that is transmitted in the network to disseminate the information **(Sinha: col. 2, lines 58-64)**.

As per claim 13-15, Sinha-Walrand teaches wherein transmission control protocol/Internet protocol (TCP/IP) connections are used for the dissemination (Walrand: col. 3, lines 57-63); wherein the compact representation is a node aggregate vector V.sub.na wherein each element of V.sub.na corresponds to a node in the network wherein the element's value is a function of the maximum of reservation bandwidths reserved on all links incident to the node and wherein the dissemination is accomplished using a link-state routing protocol **(Sinha: col. 4, lines 4—col.5, line 9).**

As per claim 16, Sinha-Walrand teaches wherein a compact version of the network data structure is used to reduce the amount of data that needs to be transmitted in the network to disseminate the information about each link **(Sinha: col. 2, lines 58-64)**.

As per claims 17-19, claims 17-19 lists substantially the same elements as claim 1 and is thus rejected using the same rationale.

As per claim 20, claim 20 is substantially the same as claim 12 and thus rejected using similar rationale.

As per claim 21-23, claims 21-23 are substantially the same as claim 7 and therefore rejected using similar rationale.

As per claim 24, Sinha-Walrand teaches wherein the service data structure is a primary path vector having a plurality of entries corresponding to all the nodes and link in the network wherein each entry of the primary path vector identifies whether the corresponding node or link is or is not part of the primary path for the new service **(col. 3, lines 60-col. 4, line 3).**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joiya Cloud whose telephone number is 571-270-1146. The examiner can normally be reached Monday to Friday from on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3922.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMC

Art Unit 2444   **January 30, 2010**

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2444